RESPONSE TO COMMENTS – DATED SEPTEMBER 6, 2006
REISSUANCE OF NPDES PERMIT NO. NH0022055
ENVIROSYSTEMS, INC.
HAMPTON, NEW HAMPSHIRE

The U.S. Environmental Protection Agency (EPA-New England) and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) solicited public comments from April 24, 2006 through May 23, 2006 on the draft National Pollutant Discharge Elimination System (NPDES) permit to be reissued to EnviroSystems, Inc. (ESI). This permit is for the discharge of culture flow through water and wastewater from both static and flow through exposure bioassays.

EPA-New England received one set of comments during the public notice (comment) period from ESI dated May 22, 2006. The following is a list of the responses to those comments and any changes made to the public-noticed permit as a result of those comments. A copy of the final permit may be obtained by writing or calling Dan Arsenault, United States Environmental Protection Agency, 1 Congress Street, Suite 1100 (CMP), Boston, Massachusetts 02114-2023; Telephone (617) 918-1562. Copies may also be obtained from http://www.epa.gov/region1/npdes/index.html.

Comments from ESI

COMMENT NO. 1:

"The draft permit for NPDES discharge NH0022055, hereafter referred to as the Permit, specifies that ammonia nitrogen be monitored twice per week. The monthly average for the parameter is specified to 21 mg/L. There is no daily maximum limit for the parameter and the permittee is only required to "Report" the highest value. Review of 850 data points collected since issuance of the current permit, documents that the mean ammonia level in the discharge is 0.16 mg/L and the median value is 0.05 mg/l, a value half the reporting limit for the parameter. The data also document that of the 850 data points only 18, 2.1%, of values exceed a value of 1 mg/L, 2, 0.5%, of the values exceeded 2 mg/L and the maximum value reported was 3.5 mg/L. A copy of these data are attached. Based on these data we are requesting that the requirement for twice weekly ammonia monitoring be dropped from the permit. The permittee will continue to submit ammonia data collected as part of the quarterly WET biomonitoring requirement specified in the permit. This request is not for a reduction in the limit for ammonia in the discharge, but rather a reduction frequency of monitoring from twice per week to once per quarter. Historic data for the discharge clearly documents that ammonia levels in the effluent discharged from the facility are routinely below the reporting limit and are not likely to approach the permit limit of a monthly average value of 21 mg/L. Additionally, data collected on levels of ammonia in the Taylor River document a historic mean value of 0.15 mg/L ammonia nitrogen."

RESPONSE NO.1:

EPA agrees with ESI. Since the highest ammonia nitrogen level of 850 data points has been 3.5 mg/L with a mean of 0.16 mg/L, the monitoring frequency has been reduced to once per quarter. This monitoring may be performed in conjunction with the quarterly WET biomonitoring requirement contained in the permit.

COMMENT NO. 2:

"Review of the Permit indicates that the pH limits for the discharge are 6.5 to 8.25 SU, Part 1.A.1. Section 1.E.a., State Permit Conditions, specifies a range of 6.5 to 8.0 SU. We request that the State Permit Conditions be modified to match the limits specified in Part 1.A.1. ESI submitted data to the EPA and State of New Hampshire Department of Environmental Services (DES) during 2002 regarding pH levels of the Taylor River to support a request for modification of the pH discharge limit of 6.5 to 8.25 SU based on ambient pH levels of the River. The New Hampshire DES supported the modification of the Ph limit to be 6.5 – 8.25 SU."

RESPONSE NO. 2:

Section 1.E.a. of the permit, State Permit Conditions, states that the pH range of 6.5 – 8.0 standard units (S.U.) must be achieved in the final effluent unless the permittee can demonstrate to NHDES: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring source water pH is unaltered by the permittee's operations. In no case, shall the above procedure result in pH limits less restrictive than any applicable federal categorical effluent limitation guidelines regulations.

On January 31, 2002, ESI submitted data to NHDES to support an increase of the pH range from 6.5 – 8.0 SU to 6.5 – 8.25 SU. In a letter to ESI dated March 4, 2002, NHDES approved this request. ESI then sent a letter to EPA on March 15, 2002 requesting a modification of the pH range in the permit. Because the modification request was made relatively close to the expiration date of the previous permit, January 15, 2003, it was decided that the pH modification would be made when the permit was reissued. Therefore, the adjusted pH limits are reflected in the new permit. Section 1.E.a. of the permit has been modified to reflect the fact that ESI has demonstrated that a pH range of 6.5 – 8.25 SU is acceptable.

COMMENT NO. 3:

"The Permit specifies that fecal coliform bacteria shall be measured using a most probable number (MPN) technique. Currently, permit monitoring requirement for fecal coliform bacteria are being met using a membrane filtration method, Standard Methods 9222 D. Method 9222 D. is identified as an approved method for this parameter in 40 CFR Part 136. We are requesting that Standard Method 9222D. for the analysis of fecal coliform bacteria by membrane filtration be allowed for the purpose of permit

monitoring. Additionally, ESI is currently certified under NELAP for analysis of fecal coliform bacteria by membrane filtration."

RESPONSE NO. 3:

The requirement to perform fecal coliform testing using Method 9221 C has been removed from the permit. Testing may be performed using either the Most Probable Number Method (9221 C) or the Membrane Filtration Method (9222 D). Enterococci bacteria testing may be performed using Method 9230 B or Method 9230 C. These methods can be found in Standard Methods for the Examination of Water and Wastewater, 20th Edition.

COMMENT NO. 4:

"The Part 1.D.3., Special Conditions, of the Permit specifies that an annual/biannual inspection of the discharge diffuser be made by a licensed diver and include videotape of the diffuser operation. Visibility in the Taylor River under normal conditions is marginal due to a high suspended solids load, mean value of >50 mg/L and water color. Photographs of the diffuser taken during annual inspection for the past two years document these conditions. Videotape of the operation of the diffuser will also not likely provide any observable activity. Discharges to the diffuser, jointly used by EnviroSystems (ESI), and Aquatic Research Organisms (ARO), are periodic, occurring approximately once per hour for ESI and one every quarter hour for ARO. When discharges are made in concert, the total flow is approximately 40 gallons. ESI's contribution, 10 gallons, is discharged over a 3 minute period while ARO's contribution, 30 gallons, is discharged over approximately 1 minute. The discharge line ahead of the diffuser, approximately 400 feet long with a 6-inch diameter, has a capacity of approximately 600 gallons. As the system does not back up into either ESI's or ARO's facilities the discharge line is ever full and must discharge the volume pumped into the line prior to the next activation. At high tide it is unlikely the discharge line is full, but it still manages to discharge the volume being discharged from the facilities. As the system is not pressurized but gravity controlled, flows out through the 3 diffusers are controlled by the magnitude of the head in the system. This will vary from near 1 foot at high tide, to a maximum of 8 feet at low tide. Under gravity pressure, flow out of the diffuser pinch values will be extremely low, possibly on the range of a half gallon per minute per port. It is unlikely that these weeps would be observable in a videotape. We request that the videotape requirement be removed from the annual/biannual inspections of the diffuser."

RESPONSE NO. 4:

Videotaping of the outfall diffuser remains a requirement of the permit. EPA understands the turbidity issues and the small flow from the facility which make it difficult to video tape and/or photograph the effluent exiting the diffuser. In order to overcome this problem EPA is requiring that a dye such as Rhodamine WT, or similar product, be added to effluent so that it will be visible coming out of the diffuser. The permit has also

been conditioned so that ESI will contact EPA and NH DES-WD at least 7 days prior to the diver inspection of the outfall diffuser and use of the dye.

COMMENT NO. 5:

"Monitoring of Enterococcus bacteria levels in the discharge has been added to the permit with a permit limit of "Monitor". The permittee's facility does not produce Enterococcus bacteria, the only documented source of these bacteria is the Taylor River which is used in the laboratory for the maintenance of marine test organisms and flow-through biological testing. The Taylor River in the near vicinity of the discharge is not traditionally used for swimming and direct water contact recreation is limited to personal water craft and other small water craft during the summer months. We would propose that during the summer months, defined as June through Labor Day in September the permittee conduct Enterococcus monitoring twice per week as specified in the permit. Monitoring during the remainder of the year would be on a monthly basis."

RESPONSE NO. 5:

Under NH R.S.A 485-A:8.II Class B waters shall be considered acceptable for fishing, swimming, and other recreational purposes and, after adequate treatment, for the use as water supplies. For tidal waters utilized for swimming purposes, NH R.S.A 485-A:8.V states that these waters shall contain not more than either a geometric mean based on at least 3 samples obtained over a 60 day period of 35 Enterococci per 100 milliliters, or 104 Enterococci per 100 milliliters in any one sample, unless naturally occurring.

While there are no obvious swimming areas on the Taylor River in the area of the outfall or immediately downstream, it is the duty of EPA to ensure that any permit issued will protect and maintain the designated uses of the receiving water. EPA has determined that the year round monitoring requirement for entercocci at a frequency of twice per week is necessary to ensure that the water quality of the Taylor River is protected and maintained.